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# **The connections between fiscal policy and the government ideological composition – evidence from OECD countries**

Master thesis

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I have written this master's thesis independently. All viewpoints of other authors, literary sources and data from elsewhere used for writing this paper have been referenced.

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## **Abstract**

Does the government ideological composition play a role in fiscal policy formation? According to the conventional view left winged governments are more likely to increase government spending, while right winged governments are reducing public debt. This paper examines how ideological composition of government influences general government spending using data from 25 OECD countries for the period from 1995 through 2014. Results of fixed effect regression model suggest that there is no effect of partisanship neither on general government expenditure, nor on social spending or military spending. Results also suggest that while there is no difference in spending amount, left-winged governments tend to have relatively higher deficit spending policies than right-winged government. Also, I find a negative significant effect of right winged ideology on general expenditure in case of relatively high unemployment level. On the one hand empirical findings support newly developed idea that partisanship effect is insignificant as partisan differences are minor due to the increased level of globalization and international integration in last few years, but on the other high debt policies for left oriented governments underline the effect of ideological difference on policy formation.

**Key words:** Partisan politics, Fiscal policy, General government expenditure.

**JEL code:** H50, H60, E23, E62

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# Introduction

Party ideology of government is believed to have a significant effect on fiscal policy. However, empirical evidence on this matter is diverse. Recently, a substantial body of literature addresses economic and political determinants of public policy (Imbeau 2001). Many studies have questioned the existence of any major difference between left-right ideologies (Hofmesiter 2011), while others have argued about distinctive government policies based on core differences developed in ideological origins (Hibbs 1977). Some scholars have discussed the globalization as a destructive factor for partisan differences (Goodman & Pauly, 1993), while others have introduced certain circumstances and conditions where partisanship emerges (Shi & Svensson, 2006).

Theoretically it is considered that compared to right winged government, left winged governments implement higher general spending policies (Swank 1998). However, some empirical studies present contrary results (Garrett & Lange, 1991). Still, large number of studies blame left winged governments in increased deficit spending (Roubini 2008). Some papers have focused on partisan effect on general government spending (Cusack 1999), while others have looked separately on social or military expenditure (Klingemann et al., 1994; Whitten & Williams, 2011). Many studies have considered governments led by left-winged parties to be more responsive to unemployment and governments led by right-winged parties - to inflation (Hibbs 1977, Carlsen 1997). There is no unambiguous overall methodological approach as studies have looked at many different aspects of the relationship between government composition and fiscal policies.

This master thesis explores partisan influences on fiscal policy during the relatively recent time period, 1995-2014, from OECD countries. Based on various discussion and implication in theoretical literature and empirical studies, following research goals were identified. First, the paper aims to analyze partisan differences reflected on public expenditure, whether right or left winged governments encourage an increase of general government spending. Second, we intend to analyze partisan effects in particular fields of general government expenditure, more specifically, on military and social spending. Third, this paper plans to study partisanship effect on government debt. Fourth research goal is to study how partisan ideological differences are

represented in macroeconomic policies, for instance, given the inflation-unemployment trade-off (so-called Philips curve), left-winged parties are expected to be more oriented to solving issues related to unemployment while right-winged parties are more averse to inflation.

For empirical analysis paper uses the panel data of 25 OECD countries in time period from 1995 through 2014. Results are derived based on fixed effect regression models. While ideology-policy relationship can be studied from very different angles, my analysis focuses on different aspects of fiscal policy. In other words, besides observing general government spending, I also study military and social expenditure.

On the one hand, results of empirical analysis are opposite to conventional view which argues about major impact of partisan politics on fiscal policy (Cusack 1999). My findings suggest that there is no effect of partisanship on general government expenditure. Also I find no impact of ideological composition of government on social or military spending. On the other hand, I find a negative significant effect of right winged ideology on government debt.

The paper contains five major sections. First section is an introduction. Second section reviews theoretical background and previous empirical studies of the problem. Third section introduces us with the data and methodology used. Forth section derives and discusses results. The last section concludes and presents the policy implications.

# Theoretical Background

The topic “The connection between government ideological composition and fiscal policy” is a complex theme and covers various theoretical approaches that need to be discussed. Before stating arguments on bases of different previous studies which correspond to hypothesis that will be tested in empirical part of this master thesis, I will provide brief overview of theoretical aspects that are related to the topic. The section of theoretical background consists of two parts. First part, political business cycle, discusses theoretical approaches that study the government and policy change relations. Second part, partisanship and fiscal policy, introduces arguments that support or oppose the effect of ideological composition on fiscal policy.

This master thesis aims to analyze the connection between government ideology and fiscal policy. The effect of ideology emerges during policy implementation process, which is a complex procedure as there are several groups that participate in fiscal policy decision-making process (Kontopoulos 1999). On the one hand there is legislative side of decision-making which is presented by the number of parties in the ruling coalition, on another, there is executive side of decision-making which consists of ministers (Pirret 1997). This master thesis mainly focuses on the effect of ideology on fiscal policy through legislative side of decision-making as it is considered that in the legislative branch views of decision makers are more accurately reflected than in executive branch (Holcombe 2009). Also, it should be underlined that excluding executive side limits results derived in empirical part of this master thesis and author recommends further investigation of the problem.



## Political Business Cycle

There are many theoretical and empirical studies related to this topic, showing the impact of political system, different ideological composition of political parties and institutions on fiscal policy, especially on government expenditure. This field of study is often related to the idea of political business cycle – the concept that describes changes of macroeconomic variables caused by political cycles, mostly by elections (Drazen 2000). On the one hand, it is considered that politicians manipulate the economy (usually by increasing or decreasing money supply) to achieve personal ends, especially during the election period<sup>1</sup> (Nordhaus 1975). However, according to many papers political business cycles are result of voters' choice of particular parties with certain ideological preferences (Hibbs 1977).

The study of political business cycle is diverse and the figure 1 shows the scheme of the subject which represents branches of the political business cycle. There are distinguished two main models of political business cycles: opportunistic model and partisan model (Drazen 2000). Opportunistic political business cycle identifies a cycle in politicians' behavior to increase chances of his or her re-election (Block 1999). The opportunistic political business cycle contains two different branches: First, classical theory – traditional opportunistic political business cycle and second, rational opportunistic political business cycle (Drazen 2000). While in traditional business cycle model opportunistic behavior is about the desire of parties to win election, rational opportunistic model additionally introduces the motivation of voters. (Nordhaus 1975). In this model voters are rational, they try to maximize their preference functions (Heckelman 1998).

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<sup>1</sup> Even though Central Bank is independent in most developed countries, political pressure during election period is intensive (Drazen 2001).

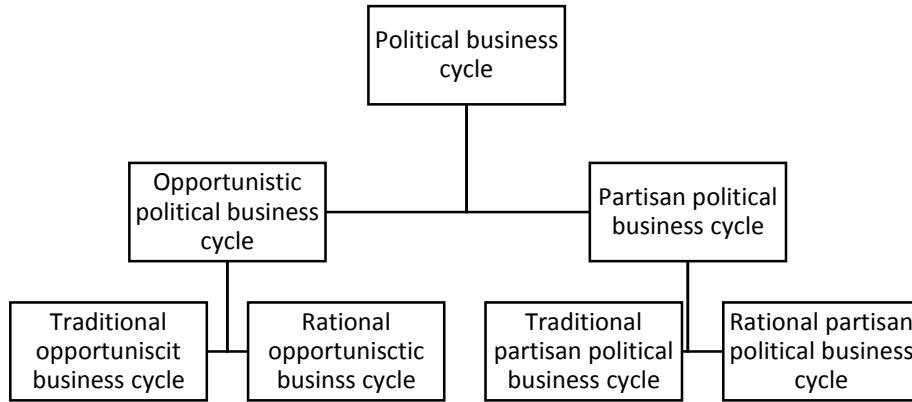


Figure 1. Scheme of political business cycle

Source: compiled by the author based on Drazen (2000).

While opportunistic political business cycle model is based on politicians' motivation for re-election, the partisan model focuses on different party policies based on different ideologies and economic goals (Hibbs 1977). In this model, business cycles are the result of ideological views and researchers point to the correlation between governments' ideological composition and economic policies. The partisan political business cycle is divided into two different branches: traditional partisan political business cycle model and rational partisan political business cycle (Drazen 2000). In rational partisan political business cycle model voters chose the party with best results. This model introduces median voter theorem, which deals with middle voters who have neither left nor right ideological believes (Congleton, 2002).

According to the partisan model political views are divided in two groups: left and right. (Drazen 2000). The partisan theory of macroeconomic policy is based on the idea that political parties weight nominal and real economic performance differently (Hibbs 1977). The differences between political party ideologies reflected in economic preferences which are captured in partisan model are discussed in the following section of this paper. Generally, left and right ideology differences are related to the degree of government intervention in individuals' life, both economically and socially. Left-winged governments are considered to have relatively more expanded role in the latter than right-winged governments (Rockey 2014).

## Partisanship and fiscal policy

Supporters of partisan political business cycle concept often argue that party ideologies are based on ideological and economic goals, thus as left wing and right wing ideologies have different economic views, their policies reflect ideological differences and end up in different fiscal policies (Hibbs 1977).

There are many empirical and theoretical papers which have studied the impact of left-right orientation on the general government expenditure. Generally, it is considered that left winged parties care relatively more about unemployment while right winged parties focus on inflation issues (Hibbs 1977). It is also argued that left-winged governments tend to increase welfare expenditure but right-winged governments decrease it (Swank 1998). Government spending tends to increase more under governments of the left than under governments of the right (Blake 1993). All these views have opposing ideas which are based on different arguments related to origins of party ideology, country specific conditions and factors which cause different results in empirical papers with opposing conclusions.

Many scholars who studied political business cycle argued about the cores of ideological formation, e.g. how the ideology is formed. While some considered ideology as an upstanding idea, that was formed once with own preferences and is unchangeable (Shikano, 2004), others provided different driven factors for ideology formation (Dhillon, 2003). Supporters of an idea that ideology is not a group of fixed policies, have been divided into two branches with two main views: ones who believed that public policy is demand-driven and others, who supported the idea that public policy is supply driven. In the first case, politicians are adjusting policies based on the needs of society, while in the second case politicians are adjusting policies in order to maximize revenue (Cusack, 1997), the latter is often shown by raised taxes (Rose 1985). So, when public policy is demand-driven, political ideology, whether a party is left oriented or right oriented, can be created by electorate itself, or in the other words, even parties who have radically left-wing ideology may implement right-winged policies because of the demand from society. At the same time, when policy is supply driven, even if government has a left-winged orientation, it may provide right-oriented policies, in order to maximize revenue. Thus, measuring ideological

composition of a government is a complicated process and other factors, such as the nature of electorate and general conditions of economy in a country play a role in presenting real ideological preferences, in other words, left winged parties can be right winged policy makers and vice versa under different circumstances.

Another conclusion related to this discussion states that in reality parties do not have very different macroeconomic policies (Garrett & Lange, 1991) and even if they are different during election times, when parties start to govern the country, the policies implemented by left-wing and right-wing parties actually converge with each other (Cusak, 1999).

The question whether right parties are really right policy makers and left parties - left is a major question in many theoretical and empirical papers. Another important issue which is related to this problem introduces time period as a determinant factor, in other words, parties with left ideologies in the past are not always the same as left winged parties nowadays. Understanding of left-right scale has changed and countries are involved in partisan cycles very differently. The level of globalization plays a big major role in partisan politics (Goodman & Pauly, 1993; Andrews, 1994). Globalization and international integration has made connection between partisan ideologies and fiscal policy weaker than it was before. (Hagen, 2006; Efthyvoulou, 2011). While many studies support this idea, there are others with contradicting arguments. Globalization and international integration leads to other results as well. They cause market dislocation and governments often use fiscal policy to compensate it, in other words, as the level of globalization and internationalization increase, use of fiscal policy, especially by left winged governments, also rises. (Garrett, 1996, 1998).

Besides globalization and international integration, other economic conditions have also changed. Changes are very diverse across countries, which has a major impact on partisan relations to fiscal policy and ideologies are reflected into policies differently in countries with different levels of economic development (Shi & Svensson, 2006). Another factor which needs to be taken into consideration is the age of the democracy in the country. Countries with the same period of democratic system and nature of political system have similar patterns of political business cycles (Brender & Drazen, 2005). Another important issue which is related to ideological composition of government and its connection to fiscal policy is partisan differences shown in using fiscal policy as economic tool to solve macroeconomic problems inside country, in other words, it is interesting

which political ideology, left or right, is more fiscally irresponsible. As we have discussed above, party ideologies are often modified due to different economic conditions or electorate demands. Left winged governments use fiscal policy more actively for solving macroeconomic problems than right winged governments when problems are related to high unemployment, but when all macroeconomic conditions are satisfactory inside the country, partisan differences are not important (Carlsen 1997). “It is theoretically considered that left oriented governments tend to spend more than right oriented governments, but it is also known that many empirical papers have shown different results. This is due to several reasons, which we have already mentioned. Additionally, often different empirical results are due to different methodologies used by researchers. For example, economic conditions, such as economic development level of a country, level of industrialization, unemployment level, productivity and other macroeconomic factors matter, because they have an influence on the formation of partisan ideologies. Countries with similar economic conditions are easier to be compared and studied, but results are contradictory, even when some studies have looked at same the period or countries’ databases Solano in 1983 and Swank D. in 1988 undertook studies based on identical data set of OECD countries for 1960-1971 time period, but the results were totally different. While Solano found no effect of parties on expenditure, Swank finds that the dynamics of domestic expenditure change is partially conditioned by political environments of particular eras.

Many research papers about the connection between ideological compositions of government and fiscal policies take general government expenditure as a dependent variable, but some of them divide it into categories in order to emphasize effects of certain political ideologies on specific expenditure categories. Often the military and social expenditure as the two major categories of public expenditure are discussed. Scholars of political economy consider the composition of military and consumer spending as good predictors of electoral outcomes.. This leads discussion towards “guns versus butter” model, where left and right winged parties have different priorities. Generally, it is considered that right winged parties are in favor of increased military spending policy, while left oriented parties support increase of social expenditure (Klingemann et al., 1994; Whitten & Williams, 2011). Based on this view, left winged parties are expected to spend more on social issues and right winged parties on defense and security. But there is also an opposing argument. Countries which are military oriented might have increased general spending due to military purposes even under governments with left ideology, while, countries with stable defense

and security issues might cut their military spending down and increase social even when they have right winged governments. Thus, sometimes observing only general expenditure is not sufficient for discovering differences in spending attitudes. While under governments with different ideologies quantitative effect of spending is unchanged, partisan politics might have qualitative effects on expenditure, in other words, left-winged governments might increase social spending and decrease defense spending, but overall amount of expenditure may remain relatively unchanged.

General government expenditure doesn't always show a real effect of partisan influence on fiscal policy (Lockwood, 2011). It can be increased under right oriented government, but not due to reasons which are related to ideology, but due to increased revenue. In these case it is more justified to study the effect on deficit spending of a country, rather than on general expenditure.

For conclusions of theoretical review of the connection between government ideological composition and fiscal policy, it can be concluded that the views on the connection between budget government ideological composition and fiscal policy are rather ambiguous both in previous theoretical and empirical papers. Generally it is considered that left winged governments increase spending, but in many cases we have opposing results due to important economic conditions.

# Empirical Study

Based on theoretical discussion in previous chapter about partisan influences on fiscal policy several main empirical research questions were identified. First, this research paper aims to analyze partisan differences shown on public expenditure, more specifically, whether, right or left winged governments encourage an increase of general government spending. Second, I intend to analyze partisan effect on different fields of general government expenditure, more specifically, on military and social spending. Third, my aim is to study partisan effect on government debt. Fourth, this research paper aims to study how partisan ideological differences are presented in macroeconomic policies, in other words, whether opinions, that left winged parties are oriented to unemployment issues and right winged parties to solving problems related to high inflation, are true.

## Data and Method

Empirical studies about the connection between government's ideological composition and fiscal policy are mainly longitudinal or cross-sectional (Imbeau 2001). I concentrate on cross-sectional study and use panel data for empirical analysis. Our sample consists of 25 OECD countries. My aim is to analyze countries with similar democratic institutional arrangements and all countries chosen for our data are parliamentary democracies<sup>2</sup>. This approach is justified by the argument that partisan theory is only practiced in democratic systems (Hibbs 1992). As my goal is to find the connection between political composition of government and fiscal policy, the data contains both macroeconomic and political indicators. The data covers 25 countries for the 1995-2014 time period, maximum 20 years for each country are available. The relationship between countries and ideology variable is presented in Table 1. Altogether there are have 499 observation for ideology variable. 148 observations belong to Center ideology, 160 observation belongs to Left and 191 –

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<sup>2</sup> The democratic form of government where one party or coalition, which has the highest representation in legislative organ, forms the government.

Right, and thus, the governments described by the different ideologies are represented more or less equally in the data.

**Table 1: Frequencies of governments with different ideologies across the countries**

Country	Ideology			Total
	Center	Left	Right	
Austria	0	13	7	20
Belgium	15	5	0	20
Czech Republic	5	4	11	20
Denmark	0	11	9	20
Estonia	4	0	16	20
Finland	11	8	1	20
France	0	8	12	20
Germany	11	9	0	20
Hungary	9	6	5	20
Ireland	9	0	11	20
Israel	11	3	6	20
Italy	1	8	11	20
Japan	2	3	14	19
Norway	2	14	4	20
Poland	1	7	12	20
Portugal	0	13	7	20
Slovak republic	12	4	4	20
Slovenia	5	11	4	20
Spain	6	5	9	20
Sweden	0	12	8	20
Turkey	6	1	13	20
United Kingdom	0	14	6	20
Luxemburg	8	0	12	20
Netherlands	10	1	9	20
Switzerland	20	0	0	20
Total	148	160	191	499

Source: compiled by the author

Descriptive statistics of the data are presented in Table 2, which provides summary of our sample and variables including missing values. In our panel data, maximum number of observations per variable with non-missing data equals to 499. We use in total 11 different variables. For five variables - ideology, unemployment, growth rate, population size and inflation - there are no missing values in our sample. The maximum number of missing values is 39% for education



variable. In all cases, missing values are below 40%. We have used log transformation for the population variable.

**Table 2: Descriptive statistics**

Variable	Obs.	Mean	Std. Dev.	Min	Max	Max	% of missing values
Ideology	499.00						-
General Expenditure	438.00	46.10	6.36	30.90	65.56	66.56	0.12
Military Expenditure	391.00	4.62	2.62	0.98	18.53	19.53	0.22
Social Expenditure	482.00	22.05	4.91	5.60	32.00	33.00	0.03
Unemployment rate, %	499.00	7.96	3.99	1.80	26.30	27.30	-
Growth rate, %	497.00	2.54	3.17	(14.72)	21.83	22.83	-
Population (in millions)	499.00	26.10	31.70	0.41	128.00	128.00	-
Inflation rate, %	499.00	4.15	9.41	(4.48)	88.11	89.11	-
Health	475.00	77.88	3.18	66.98	83.33	84.33	0.05
Education	302.00	98.59	4.35	72.97	112.11	113.11	0.39
Debt	348.00	55.47	32.91	3.68	195.99	196.99	0.30

We use ordinary least squares (OLS), random effect (RE) and fixed effect (FE) methods for our regression analysis. Breusch and Pagan Lagrangian multiplier test for random effects showed that random effect method is preferred to OLS, thus we will use the RE model instead of the OLS model. It is also essential to choose between RE and FE models, for these purpose we used Hausman test for fixed versus random effects model, which showed that fixed effect model is preferred, thus fixed effect model is our main estimation approach.

The equation for the fixed effects model is as follows:

$$Y_{it} = \beta_1 X_{it} + \beta_2 Z_{it} + \alpha_i + U_{it} \quad (1)$$

Where  $Y_{it}$  = dependent variable,  $X_{it}$  = ideology (=0 left, =1 right, =2 center),  $Z_{it}$  = vector of other control variables,  $\beta_i$  = the vector of parameter estimates,  $\alpha_i$  = unknown country-specific intercept (country fixed effect),  $U_{it}$  = error term.

In this research paper I intend to form four models with different dependent variables. In the first model, our dependent variable is general government spending as a share of GDP taken from the OECD database. General government expenditure as a dependent variable is used in many previous studies about the connection between ideology and fiscal policy (Cameron 1978, Schmidt 1983). I have firstly looked at the total government expenditure as the dependent variable because it is considered that for identifying the connection between partisanship and fiscal policy, partisan influence on general expenditure is more important than on specific branch of expenditure (Sharpe and Newton 1984).

In the second model our dependent variable is social expenditure as a share of GDP taken from the OECD Social Expenditure Database (SOCX). In the third model our dependent variable is military expenditure as a share of GDP taken from World Bank dataset. Using specific expenditure branch as a dependent variable is a widely used practice (Klingemann et al., 1994). Generally it is considered that right winged governments spend more on military than left winged governments and left winged governments spend more on social expenditure than right winged governments (Whitten & Williams, 2011).

In the fourth model, I observe on central government debt (% of GDP) as the dependent variable. As general government expenditure doesn't always show a real effect of partisan influence on fiscal policy (Lockwood, 2011). It can be increased under right oriented government, but not due to reasons which are related to ideology, but due to increased revenue. In this case it is more justified to study the effect on the deficit spending of a country, rather than on the general expenditure level.

Main independent variable in our study is the party composition of a government presented by partisan ideology. For political ideology data we use Party Government Data Set (PGDS), which covers countries from 1995 or the year when they became parliamentary democracies till 2014 (Katsunori Seki and Laron K. Williams, 2014). Variables used in our study provided by this dataset are the following: indicator of ideological Complexion of Government and Parliament (CPG), the dates of change of government and the duration of government by number of days. Many previous studies on partisan politics cover only two ideologies (left and right) in their analysis (Borg & Castles 1981, Castles 1982, Keman 1982), but as this method has been sharply criticized on bases

of excluding the effect of center ideology<sup>3</sup> (Kersbergen 1995), I have included all three party ideologies, left, right and center, in this study.

We have transformed Party Government Data Set according to the needs of our research. First, as ideological complexion of government and parliament indicator contains strength of parties in government on the left-right dimension through a five point scale, we transformed it into three point scale. As previous CPG indicator was measured based on the share of seats of Left and Right wing parties in government and presented results in five point scale, from 1 to 5, the transformed data used the same logic (based on the share of seats), but presented results in Left, Right and Center Please correct the wording! <sup>4</sup>. Second transformation is due to the dates of governments changed. As our needs are to determine political complexion of government yearly, the data of dates when governments changed is transformed into data which shows government's ideological complexion every year. Previous data set contained data of duration of governments in days. In transformed data, the ideological composition of a new government is attached to the year of its election, only if it was elected after 182th day of the year.

Clearly, there are other factors that influence government expenditure than political ideology of government and variables are chosen in order to control for their effect. Other independent variables used in our study are as follows: unemployment rate, population size, GDP growth rate, GDP per capita, rate of inflation, health and education. The table 3 describes all the variables used in our analysis.

These variables are chosen as they have been the most significant variables in previous studies (Lewis-Beck and Rice 1985, Rice 1986) Unemployment variable is necessary to include as a control variable, because in case of high unemployment rate governments run deficit due to automatic fiscal stabilizers (Rendahl, 2012). Often government policies are modified due to different health and education conditions (Laframboise, 2003) thus we included them as control variables. Inflation and growth rate are directly linked to government fiscal policies (Engen 1992). For example, during very fast growing economy, in order to deal with inflation gap, governments

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<sup>3</sup> Center position is often represented by Christian-Democrats (Kalyvas, 2010),

<sup>44</sup> In party government dataset parties were divided into 5 ideology groups, on left-right ideology scale: left, center-left, center, center-right and right. I have transformed these groups into 3 categories. I have grouped left and center-left as left ideology, similarly, right and center-right ideological groups were merged as right ideology, thus the transformation provided three groups: left, center and right.

often reduce spending policies (Forsythe, 2012). Central government debt is included as control variable for empirical analysis to capture the effect of deficit spending. Higher debt can increase government spending, as usually, governments take debts for spending purposes, but also, previous high debt policies might decrease present spending, because of increased liabilities in the future (Favero 2007).

**Table 3: Definitions of the variables used in empirical analysis**

Variable	Description	Source
General expenditure	General government spending, as a share of GDP and per person, provides an indication of the size of the government across countries.	OECD Database
Ideology	Party composition of a government presented by partisan ideology: left, right, center	Party Government Data Set (PGDS)
Unemployment	Unemployment, total (% of total labor force)	World Bank database
Growth rate	GDP growth (annual %)	World Bank database
Population	Population, total	World Bank database
Inflation	Inflation, consumer prices (annual %)	World Bank database
Health	Life expectancy at birth, total (years)	World Bank database
Education	Primary completion rate, both sexes (%)	World Bank database
Debt	Central government debt, total (% of GDP)	World Bank database
Military expenditure (% of GDP)	Military expenditures data from SIPRI are derived from the NATO definition, which includes all current and capital expenditures on the armed forces, including peacekeeping forces; defense ministries and other government agencies engaged in defense projects; paramilitary forces, if these are judged to be trained and equipped for military operations; and military space activities.	World Bank database
Social expenditure (% of GDP)	Includes reliable and internationally comparable statistics on public and (mandatory and voluntary) private social expenditure at programme level as well as net social spending indicators.	The OECD Social Expenditure Database (SOCX).

There are different factors that affect fiscal policy and government spending. Author recommends to include additional control presented by piece index or indicator of self-perceived security situation from survey for farther investigation of the problem.

Following tables 4 shows correlation between variables under governments with different ideologies: all ideologies, left, center and right. Based on correlation results it can be concluded that correlations with debt are relatively lower in case of military expenditure. Also, health indicator is correlated primarily with social expenditure.

**Table 4: Correlation between variables under left, right and center-winged governments**

	<u>All ideologies</u>			<u>Center</u>			<u>Left</u>			<u>Right</u>		
	General Expend iture	Social Expendi ture	Military Expendi ture	General Expenditure	Social Expendi ture	Military Expendi ture	General Expendi ture	Social Expendi ture	Military Expendi ture	General Expendi ture	Social Expendi ture	Military Expendi ture
General Expenditure	1			1			1			1		
Social Expenditure	0.806	1		0.7287	1		0.8409	1		0.8188	1	
Military Expenditure	-0.09	-0.3297	1	-0.0741	-0.397	1	-0.3035	-0.3807	1	-0.0019	-0.2876	1
Debt	0.3745	0.3833	-0.0321	0.6554	0.5939	-0.3625	0.2444	0.1782	-0.146	0.2835	0.3802	0.0583
Education	0.077	-0.0079	0.3537	0.034	-0.074	0.4305	0.1347	0.1954	0.177	0.0691	-0.0871	0.3964
Health	0.1485	0.4702	0.0709	-0.1391	0.3136	0.2858	0.0165	0.3782	0.0633	0.4454	0.6216	-0.1455
Inflation rate	-0.0987	-0.3864	-0.0585	-0.0008	-0.4566	-0.0932	0.0397	-0.355	-0.2084	-0.3058	-0.3567	0.0728
Population	0.1241	0.0962	0.1805	0.2657	0.1588	0.0692	-0.3266	-0.0562	0.35	0.2508	0.0807	0.242
Unemployment rate	0.0914	0.0535	0.063	0.3307	0.2156	-0.017	0.033	0.0413	0.0615	-0.0268	-0.0481	0.1476
Growth rate	-0.3286	-0.3884	0.0819	-0.3868	-0.47	-0.0054	-0.1225	-0.2278	0.2829	-0.4186	-0.4249	0.0874

For testing the hypothesis that left winged governments care relatively more about unemployment than right winged governments, I check how government expenditure changes as unemployment increases. For smoothing the data of unemployment variable I use Hodrick-Prescott filter. I have made unemployment dummies according to country average unemployment rates. Unemployment level above country average equals to 1, in this case unemployment rate is considered to be high. Unemployment indicators below country average equal to 0 and in this case unemployment rate is not considered as a low. After creating unemployment dummies, I use FE regression model to look at the partisan effect on expenditure in cases of high or low level of unemployment.

In order to test the hypothesis that right winged governments care relatively more about inflation than left winged governments, we check how inflation rate affects the public spending presented as general government expenditure. I have made inflation dummies according to country average

inflation rates: in case of inflation level above country average the dummy equals to 1, and in this inflation rate is considered to be high. In case of inflation indicators below country average dummy equals to 0 and in this case inflation rate is considered to be a low. After creating inflation dummies, I use FE regression model to look at the partisan effect on expenditure in cases of high or low level of inflation.

## Results and Discussions

Table 5 shows relationship between different types of expenditures and ideologies. It is clear that, on the average (as I have compared means of expenditures under governments with different ideologies) there is no significant difference between party ideologies. Still, left winged governments have a little bit higher general and social expenditure, while right winged governments spend a little bit more on military. These results support the widely spread idea that left-winged governments care relatively more about social spending and right-winged governments relatively more about the military spending (Klingemann et al., 1994; Whitten & Williams, 2011). However, these results are based on simple statistics and the differences are statistically insignificant.

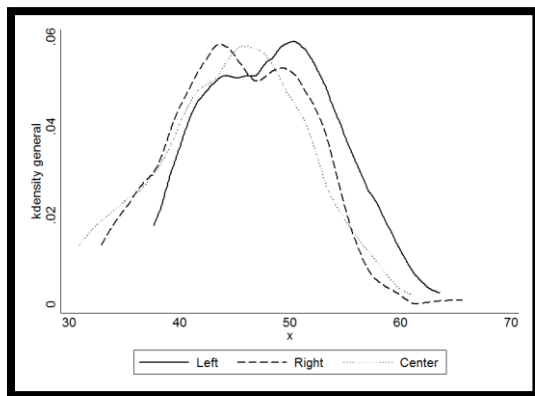
**Table 5: Relationship between expenditure and ideology.**

	<b>General expenditure mean</b>	<b>Military expenditure mean</b>	<b>Social expenditure mean</b>
Left	48,28591	4,574597	23,90962
Right	45,24753	4,545262	21,52054
Center	44,6278	4,761556	20,70284

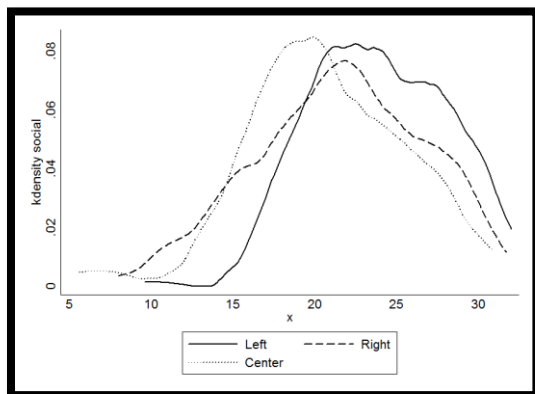
Graphs 1, 2 and 3 show ideology-expenditure relationships for general, social and military spending (respectively). Based on Graph 1, it is clear that under left-wing ideology, governments have the highest expenditure. That is followed by right ideology and under the center ideology the

level of spending is the lowest. The Graph 2, which shows the relationship between social expenditure and ideology also presents the same results, but in Graph 3 which describes military spending and ideology relationship, results are not identifiable. This non-monotonic relationship doesn't give a clear answer to our research question, but it partly corresponds to general theory that argues about relatively higher spending under left-winged governments (Swank 1998).

**Graph 1: General expenditure and ideology.**



**Graph 2: Social expenditure and ideology**



**Graph 3: Military expenditure and ideology**

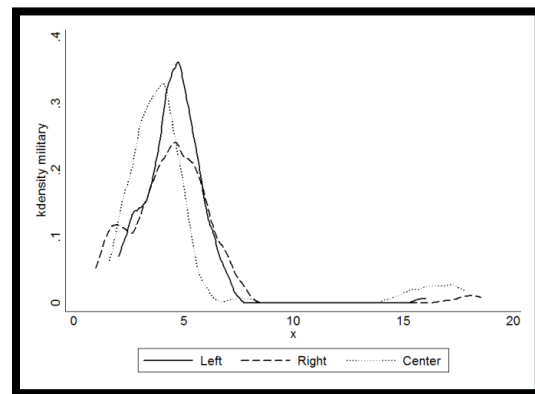
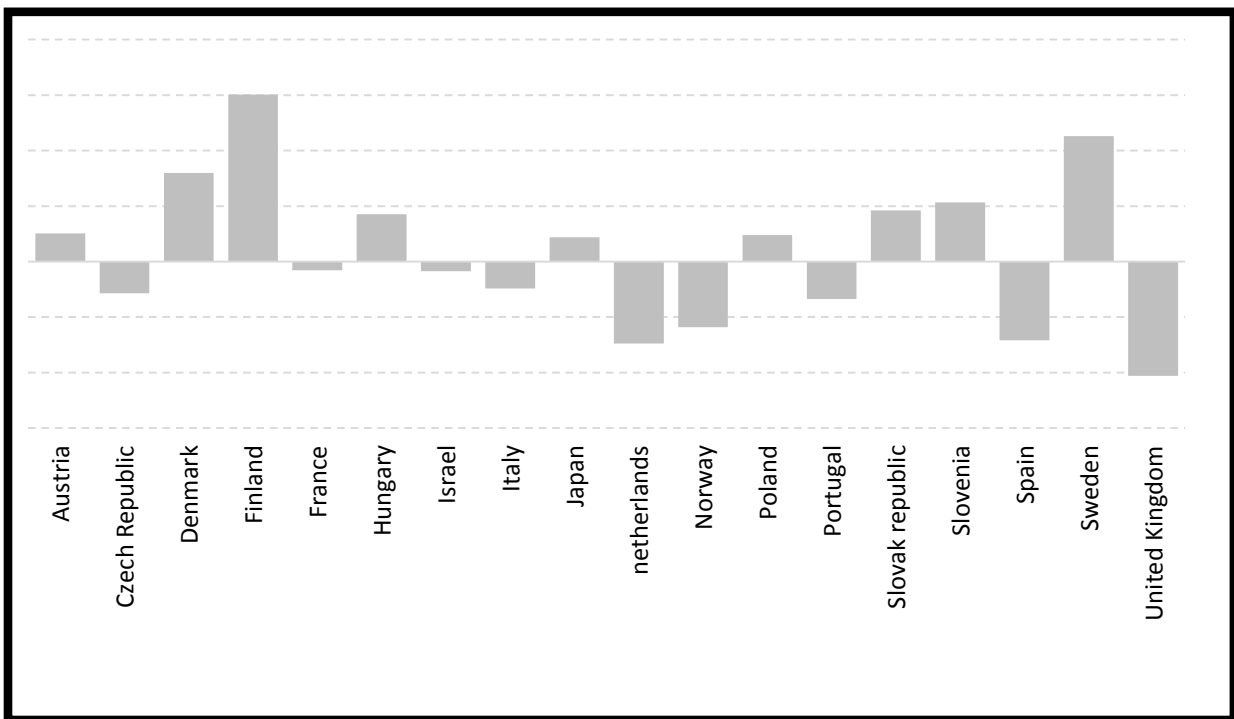


Figure 4 shows differences of average general expenditure between left-right ideologies for each country. Figure 4 supports regression estimate results from tables 6, 7 and 8 and shows that there is no significant difference between left-winged and right-winged governments in context of general government spending.

**Figure 4: Difference of average expenditure between left-right ideologies**



Note: On the figure average general government spending under left and right ideologies (separately) is calculated for each country for the period 1995-2014. Y-axis show difference of average general expenditure between left and right ideologies (average general spending under left-winged government – average general spending under right-winged government). Positive values indicate that left-winged governments spend relatively more than right-winged governments on average.



After looking at descriptive evidence, I present results based on regression analysis. Following tables 6, 7 and 8 present regression estimate results for OLS, random effect and fixed effect models, where the dependent variable is general government expenditure. I present regression estimate results for all models, but conclusions of this paper are based on fixed effect model as Breusch and Pagan Lagrangian multiplier test for random effects showed that random effect method is better than OLS and Hausman test did not support Random Effects.

Table 6 presents results of OLS, RE and FE baseline models, which contain general government expenditure as a dependent variable and include all control variables besides macroeconomic variables: population, health, education and debt. FE model shows that there is no significant effect of ideology on general government expenditure (% of GDP). In two cases, for population and debt the effect is positive and significant.

Table 7 presents results of OLS, RE and FE baseline models, which contain general government expenditure as a dependent variable and all independent variables including macroeconomic variables, unemployment, inflation and growth rate. FE model shows that there is no significant effect of ideology on general government expenditure (% of GDP). The coefficients for unemployment and debt are positive and significant, which is explained by an increasing tendency of government spending when unemployment rises and frequent debt covering of government expenditure. Health variable shows negative and significant sign, which is an expected result. As health variable is presented by life expectancy at birth, the lower the indicator gets the higher expenditure is used for health benefits. Growth rate results in negative and significant sign, which is a logical result: as our dependent variable is general government expenditure over GDP, thus it is expected that it has negative relationship with GDP growth rate.

Table 8 presents results of RE and FE models, which contain general government expenditure as a dependent variable, all control variables including macroeconomic variables and additionally to earlier models the year dummies. FE model shows that there is no significant effect of ideology on general government expenditure as a % of GDP. Results of other control variables are also unchanged compared to the previous models. All models showed no significant effect of ideology on general government expenditure. This result is presented in figure 4, which shows that countries from our sample have approximately same level of general government expenditure under left and right winged governments

**Table 6: Results of OLS, random effect and fixed effect regression models without macroeconomic variables and year dummies**

Variables	OLS	Random Effect	Fixed Effect
Right	-3.842** (-3.705)	0.238 (-0.495)	0.259 (-0.553)
Center	-2.6190.1 (-2.270)	0.479 (-0.84)	0.732 (-1.317)
Log population	-0.9250.1 (-2.031)	-0.767 (-0.805)	31.626** -3.225
Health	0.139 (-0.952)	-0.071 (-0.515)	-0.193 (-1.323)
Education	0.138 (-1.236)	-0.051 (-0.863)	-0.022 (-0.367)
Debt	0.064** (-4.001)	0.102** (-5.756)	0.130** (-6.763)
_cons	35.1810.1 (-2.311)	62.327** (-3.348)	-456.753** (-2.899)
R-squared	0.161		0.218

Note: \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

**Table 7: Results of OLS, random effect and fixed effect regression models including macroeconomic variables, without year dummies**

Variables	OLS	Random Effect	Fixed Effect
Right	-4.142** (-4.170)	-0.246 (-0.590)	-0.194 (-0.473)
Center	-2.178 (-1.968)	0.85 (-1.718)	0.9710.1 (-1.996)
Log population	-1.268** (-2.783)	-0.896 (-1.005)	22.0500.1 (-2.378)
Unemployment	0.137 (-1.162)	0.354** (-4.419)	0.325** (-3.846)
Growth rate	-0.632** (-4.960)	-0.342** (-6.644)	-0.329** (-6.506)
Inflation	-0.08 (-0.422)	0.018 (-0.231)	-0.029 (-0.374)
Health	-0.032 (-0.160)	-0.257 (-1.867)	-0.424** (-2.836)
Education	0.145 (-1.275)	0.014 (-0.242)	0.013 (-0.225)
Debt	0.063** (-4.176)	0.070** (-4.205)	0.086** (-4.505)
_cons	54.001** (-2.698)	72.255** (-3.949)	-286.364 (-1.954)
R-Squared	0.261		0.428

Note: \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

**Table 8: Results of OLS, random effect and fixed effect regression models including macroeconomic variables and year dummies**

Variables	Random Effect	Fixed Effect
Right	-3.498** (-3.401)	-0.382 (-1.124)
Center	-2.157 (-1.925)	0.351 (-0.863)
Log population	-1.343** (-2.952)	16.628 (-1.76)
Unemployment	0.054 (-0.456)	0.071 (-0.973)
Growth rate	-1.042** (-5.530)	-0.300** (-4.672)
Inflation	-0.173 (-0.824)	-0.131 (-1.847)
Health	0.017 (-0.077)	0.559 (-1.519)
Education	0.092 (-0.806)	-0.068 (-1.450)
Debt	0.051** (-3.415)	0.062** (-3.664)
_cons	70.608** (-3.252)	-253.461 (-1.512)
R-squared		0.696

Note: \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 9 shows whether the results are robust to excluding particular countries”. In first case we have excluded Switzerland as it contained only center ideology observations. In second case we have excluded United Kingdom as it is contained the highest number of left ideology observations. In third case we have excluded Estonia as it contained the highest number of right ideology observations. FE regression analysis for all cases showed the same results, thus our results are robust.

**Table 9: Robustness checks**

Variables	Excluding Switzerland	Excluding United Kingdom	Excluding Estonia
Right	-0,388 (-1.130)	-0,382 (-1.124)	-0,503 (-1.449)
Center	0,345 (-0,839)	0,351 (-0,863)	0,131 (-0,309)
Unemployment	0,069 (-0,932)	0,071 (-0,973)	0,119 (-1511)
Log population	18.270* (-1903)	16.628* (-1,76)	24.844** (-2337)
Growth rate	-0.293*** (-4.464)	-0.300*** (-4.672)	-0.159* (-1.753)
Inflation	-0.140* (-1.947)	-0.131* (-1.847)	-0.217** (-2.323)
Health	0,568 (-1528)	0,559 (-1519)	-0,379 (-0.609)
Education	-0,069 (-1.452)	-0,068 (-1.450)	0,003 (-0,048)
Debt	0.060*** (-3457)	0.062*** (-3664)	0.065*** (-3596)
_cons	-280,219 (-1.645)	-253,461 (-1.512)	-327.294* (-1.862)
R-squared	0,7	0,696	0,685

Note: Table shows fixed effect regression estimates; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

There are many theoretical and empirical papers that studied policy-ideology relationship. Many studies have considered that left winged parties care relatively more about unemployment while right winged parties focus on inflation issues (Hibbs 1977). While regression analysis for the effect of partisanship on general expenditure show no significant sign, next steps for our empirical study is to firstly to test the hypothesis that argue about relatively more increased spending policies for left-winged governments when unemployment rate is high and secondly test the hypothesis that argue about relatively more increased spending policies under right oriented governments when inflation rate is high.

Table 10 presents fixed effect regression estimation results for general expenditure. The model contains all microeconomic variables and year dummies. After using Hodrick-Prescott filter for

unemployment variable and calculating country average rates, I have made unemployment dummies, which indicate either high or low unemployment level. Unemployment rates above country average rate are considered as high unemployment, otherwise they are considered as low unemployment. Results show that there is no significant effect of partisan ideologies on general expenditure, regardless of the unemployment rate level. After calculating country average inflation rates, I have constructed inflation dummies, which indicate either relatively high or low inflation level. Inflation rates above county average are considered as high inflation, otherwise – low. Results show that there is no significant effect of ideology on government spending regardless inflation level.

**Table 10: Results of fixed effect regression model including macroeconomic variables and year dummies for high and low unemployment and inflation cases.**

Variables	fixed effect	Variable	fixed effect
Left ideology	-0.708	Left ideology	-0.175
High unemployment rate	(-0.975)	High inflation rate	(-0.318)
Right ideology	-0.555	Right ideology	-0.529
Low unemployment rate	(-0.981)	Low inflation rate	(-0.977)
Right ideology	-0.689	Right ideology	0.029
High unemployment rate	(-0.906)	High inflation rate	-0.046
Center ideology	0.166	Center ideology	0.306
Low unemployment rate	(-0.254)	Low inflation rate	(-0.546)
Center ideology	1.329	Center ideology	0.403
High unemployment rate	(-1.544)	High inflation rate	(-0.595)
Unemployment	0.334**	Unemployment	0.322**
	(-2.91)		(-3.81)
Growth rate	-0.335**	Growth rate	-0.325**
	(-6.623)		(-6.421)
Log population	21.306**	Log population	21.171**
	(-2.294)		(-2.271)
Inflation	-0.018	Inflation	-0.027
	(-0.226)		(-0.276)
Health	-0.355**	Health	-0.416**
	(-2.294)		(-2.752)

Education	0.028 (-0.47)	Education	0.013 (-0.235)
Debt	0.079** (-4.021)	Debt	0.086** (-4.5)
_cons	-280.571* (-1.914)	_cons	-272.759* (-1.853)
R-squared	0.439	R-squared	0.437

Note: Table shows fixed effect regression estimates; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Theoretically it is considered that government spending tends to increase more under governments of the left than under governments of the right (Blake 1993), which is opposed by regression analysis results presented above. Also, it is argued that differences between left-winged government spending policies and right-winged government spending policies are not always shown in increased or decreased general spending, but in specific expenditure categories, such as military and social spending. Generally, it is considered that right winged parties are in favor of increased military spending policy, while left oriented parties support increase of social expenditure (Klingemann et al., 1994; Whitten & Williams, 2011).

Table 11 presents results of two FE regression models. First model contains military expenditure as a dependent variable, second model includes social expenditure as dependent variable. Both models contain all control variables including macroeconomic variables and year dummies. FE model shows that there is no significant effect of party ideology on either social or military expenditure. Relatively high unemployment rate has positive significant association with social and negative significant sign towards military expenditure. Health has positive significant sign in both models. Inflation has negative significant sign in first model where dependent variable is social expenditure, thus, lower inflation results in higher spending on social programs. Debt has positive significant sign towards social and negative significant sign towards military expenditure, thus, debt is probably used for social spending rather than for military purposes.

**Table 11: Results of fixed effect regression model including macroeconomic variables and year dummies for military and social expenditure**

Variables	Social expenditure	Military expenditure
Right	0.019 (-0.089)	-0.084 (-0.852)
Center	0.016 (-0.063)	0.131 (-1.107)
Log population	5.724 (-1.039)	-8.774*** (-3.421)
Unemployment	0.121*** (-2.662)	-0.065*** (-3.075)
Growth rate	-0.165*** (-4.132)	0.029 (-1.551)
Inflation	-0.143** (-2.244)	-0.017 (-0.808)
Health	0.586** (-2.546)	0.316*** (-2.963)
education	-0.014 (-0.472)	0.044*** (-3.201)
Debt	0.030*** (-2.87)	-0.015*** (-3.169)
_cons	-114.666 (-1.176)	119.231*** (-2.616)
Year Dummies	Yes	Yes
R-squared	0.656	0.516

Note: \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Regression analysis both, for general government expenditure as dependent variable and specific category of expenditure, social or military expenditure, as dependent variable showed the same results, that there is no significant difference between left and right oriented governments. However, expenditure doesn't always show a real effect of partisan influence on fiscal policy (Lockwood, 2011). Many scholars consider that it is more justified to observe the partisan effect on deficit spending, rather than on general expenditure or any specific field of government spending (Lockwood, 2011).

Table 12 shows results of random effect and fixed effect regression models, where government debt (center government debt, % of GDP) is taken as dependent variable The model contains all

control variables including macroeconomic variables and year dummies. In contrast with all other models presented above, this regression model shows different results as there is a negative significant effect of right ideology on government debt, thus, compared to left-winged governments, right-winged governments have significantly low debt policies.

Based on the results from table 12, it can be concluded that while left and right oriented governments have equal spending policies, left-winged governments sponsor government spending by debt and right-winged governments increase spending due to increased revenue.

**Table 12: Results of random effect and fixed effect regression model including macroeconomic variables and year dummies for government debt**

Variable	Random Effect	Fixed Effect
Right	-4.564** (-2.807)	-3.829** (-2.469)
Center	3.086 (-1.563)	2.539 (-1.352)
Unemployment	1.943** (-6.519)	2.121** (-7.42)
Growth rate	0.08 (-0.391)	0.012 (-0.062)
Log population	8.673* (-1.868)	-139.886** (-4.332)
Inflation	0.103 (-0.337)	0.455 (-1.531)
Health	0.698 (-1.269)	1.477** (-2.587)
Education	0.636** (-2.876)	0.582** (-2.753)
Constant	-221.258** (-2.573)	2127.142** (-4.173)

Note: \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

In empirical part of this master thesis I have tested hypothesis formed in theoretical part and derived results. Following section summarizes results and provides conclusions and farther recommendations for the study of this topic.



# Conclusions

The aim of my research paper is to find connections between the ideological composition of government and fiscal policy. Our research goals were to analyze how partisan differences are reflected in general government expenditure, in particular whether right or left winged governments lead to increase of public spending. The paper aims to observe partisan effects on military and social expenditure and study the impact of right-left ideology on general spending in cases of high unemployment and inflation. Also, the paper aimed to look at the effect of partisanship on central government debt, in other words, to observe the partisan difference of deficit spending policies.

Based on empirical analysis in previous section about partisan influences on fiscal policy several conclusions can be made. First, we found no effect of partisanship on general expenditure, second we found no effect of party ideology on specific field of expenditure such as military and social expenditure. Third, we find negative significant effect of right ideology on center government debt. Fourth, we find no effect of ideology on general expenditure under different levels of unemployment or inflation. This results indicate that understanding of left-right scale has changed. The level of globalization has played a big role in partisan politics (Goodman & Pauly, 1993; Andrews, 1994) and has weakened the connection between partisan ideologies and fiscal policy (Hagen, 2006; Efthyvoulou, 2011).

Based on empirical results of this paper, on the one hand there is no connection between ideological differences of government and fiscal policies as partisanship does not influence volume of government spending, but on another, left-winged governments use relatively higher debt policies than right-winged governments as we found negative significant effect of right ideology on center government debt.

This master thesis has several limitations. It mainly focuses on the effect of ideology on fiscal policy through legislative side of decision-making as it is considered that in the legislative branch views of decision makers are more accurately reflected than in executive branch (Holcombe 2009),

but excluding executive side limits results derived in empirical part of this master thesis and author recommends further investigation of the problem.

Politicians can be adaptive or may actively influence the economic situation. In reality we do not know which attitude is dominating. Whether they adapt to voters' wishes or whether they influence variables to change the voters' evaluations. This master thesis has assumed that politicians are partisan politicians who are assigned to ideologies. But according to Rothenberg (1965) politicians have to win first the votes before they can try to act according to the ideological part of their utility functions. Political business cycle has two main branches: opportunistic and partisan. While the partisan model focuses on different party policies based on different ideologies and economic goals, opportunistic political business cycle model is based on politicians' motivation for re-election (Hibbs 1977). Results derived in empirical part of this paper are limited to partisan political business cycle and author recommends the study of this problem by including opportunistic effect as well.

In different phases of the political process e.g. the pre-elective phase, a campaign phase, a government forming phase, and a government phase (Schleicher 1971) the policies are different. Another way to extend the study is to focus on different phases of the political process separately.

# Appendices

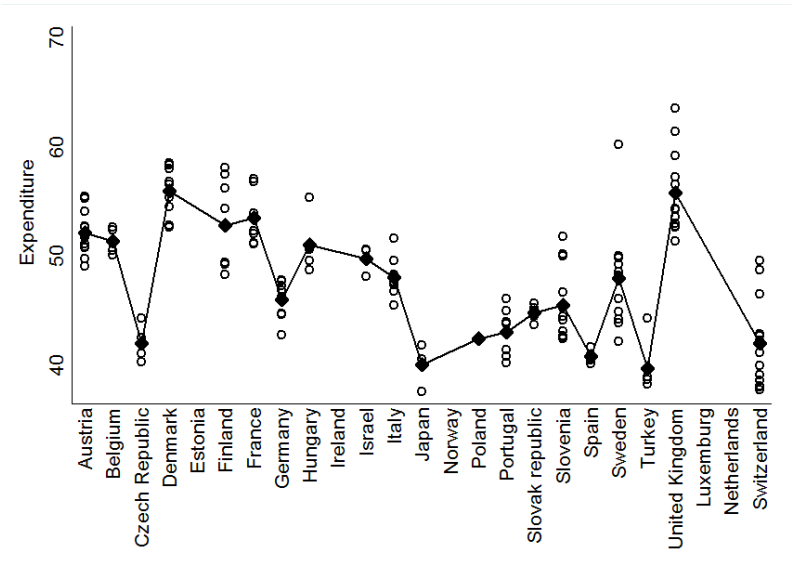
Appendices 1: Overview of the studies on the linkages between government ideological composition and fiscal policies

<b>Title</b>	<b>Author(s)</b>	<b>year</b>	<b>Results</b>	<b>CoCountries</b>	<b>Period</b>
Political business cycle in industrial countries	Alberto Alesina,	1989	Finds significant partisan influence on fiscal policy.	Western europe, industrial economies	
A Partisan Model of Government Expenditure	Thomas Bräuninger	2004	Finds support for the effect of partisan composition of governments on macroeconomic policy-making. The results suggest that the actual spending preferences of parties matter whereas the results do not indicate that parties of the left consistently differ from parties of the right in their spending behavior	19 OECD countries	1971-1999
Andrd Blais, Universite de Montreal Donald Blake, University of British Columbia Stdphane Dion, Universite' de Montre'al	Do Parties Make a Difference? Parties and the Size of Government in Liberal Democracies	2011	The analysis shows that governments under left ideology spend relatively more than parties of the right-winged governments.	15 liberal democracies	1860-1987
Political Cycles in Public Expenditure: Butter vs Guns	Vincenzo Bove	2013	. First, governments tend to bias outlays towards social expenditure and away from military expenditure at election times. Second, membership in the NATO alliance affects the timing of election-driven military spending manipulations. Perhaps Third, partisan distinctions are clearly discernible but differ between the two types of expenditure: while certain categories of social expenditure are higher during left administrations,	22 oecd countries	1988-2008

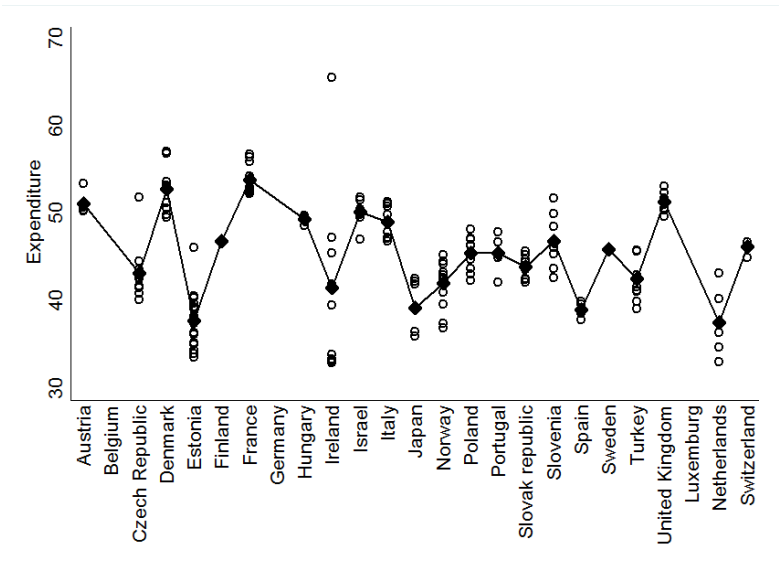
			military expenditure are higher during right administrations.		
Who Spends More: Left or Right?	Michel Kelly	2013	In reality, there is no systematic relation, for any of the three governments, between the left-wing or right-wing ideologies of the parties in power and the evolution of public spending as a share of GDP. In all three cases, it is actually left-wing governments that most reduced the relative size of government, and in one of the three cases (the United States), it is a right-wing government that most increased it.	Canadian federal government, the Quebec government, and the American federal government.	1968-2012
Fiscal policy, deficits and politics of subnational governments: The case of the German Laender	Helmut Seitz	2000	Regional differences in public debt accumulation and public expenditure policy in general are largely determined by interregional differences in economic performance, no significant impact on the ideological composition of the Laender governments was found.	Germany	1970-1999
Partisan politics and fiscal policy	Cusack, Thomas R.	1997	The evidence produced in this paper suggests that the relationship between partisanship and fiscal policy is contingent on macroeconomic conditions. The left has tended to treat fiscal policy as a counter-cyclical tool, tightening fiscal policy when aggregate demand is high and loosening it to stimulate the economy when demand is low. On the other hand, the right has either refrained from such activism or actually conducted procyclical fiscal policies. The evidence also suggests that these partisan-based differences have been reduced over the recent decades.	14 OECD countries	1961-1991

Fiscal Policy and the Democratic Process in the European Union	William Roberts Clark	2001	Finds that there is no systematic evidence for partisan differences. Given this, it is hard to see how EMU can add to the democratic deficit in the European Union.	European Union countries	1981-1992
Government Weakness and Local Public Debt Development in Flemish Municipalities	John Ashworth	2005	there is general Supports for the fact that the number of parties Jaan: perhaps you could add that as the control variable in your regressions...in a coalition has a positive effect on the municipality's short-term debt levels—in line with government inaction models.	298 Flemish municipalities	1977-2000
Partisan politics and public finance: Changes in public spending in the industrialized democracies, 1955–1989	Cusack, Thomas R.	1997	The results of the analysis lend firm support to the partisan politics model. The results also suggest, contrary to conventional wisdom, that partisan political influences have not been eliminated with the tightening of linkages to the international economy.	16 OECD countries	1955-1989
Do political determinants affect the size and composition of public expenditure? A study of the Indian states	Bharatee Bhusana Dash	2013	The overall findings of the study suggest that the relationship between expenditure measures and political determinants across the Indian states validates the proposed hypotheses even after controlling for the traditional and other unobservable determinants. These findings are robust to various forms of sensitivity analysis.	14 Indian States	1980-2007

**Appendices 2: Homogeneity of general expenditure across countries under left ideology**



**Appendices 3: Homogeneity of general expenditure across countries under right ideology**



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